SBR No. 47/17-18
DATED 26/7/17

No. 1st & Final Bill

Original/Duplicate/Triplicate

# CONTRACT CERTIFICATE

(For Other Works)

EE/ELE/Y/BR No. 47/17-18

Date.....2010

Division: **Electricals (Yelahanka)**

Sub-Division: **Electricals**

Dt. 26-7-17

Bill Received No. Dated Divisional / Sub Divisional

Cash Book Voucher No..... Dated.....

Schedule Docket No. Head of Account : P

**Job Code :-06-17-000046**

D.R.No. :

**Name of Work** : *Providing Energy Efficient Street Lights controls and Connecting Lines in Ward no 6.*

Name of Contractor and Full Address: **Technical Maneger-2, KRIDL,**

Reference to Agreement No: EE/Ele/YZ/WO/ 26 /17-18

Date: 06-06-2017

Certified that the measurements were taken by me on 26/7/17 and recorded of Pages 310779 to 794 of measurement Book No. 3108/1617 and that the work is satisfactorily executed.

EXECUTIVE ENGINEER-4
KRIDL, BBMP DIVISION
BENGALURU-560 010

**Contractor**

**Officer-in-charge of work**

Certified that the measurement were taken by me on 26/7/17 and found correct. The work is satisfactorily executed.

Certified that the quantities of materials shown in column 3 of Account have been actually brought to site of the work and the contractor has not previously received any advance on this security. These materials are of and imperishable nature and are all required for immediate use on the work in connection with items for finished work have been agreed upon. A normal agreement signed and executed by the contractor is recorded in the office.

**Sub-Division Officer**

Assistant Executive Engineer (Ele)
BBMP, Bangalore

II Memorandum of Payment

| | | |
|---|---|---|
| 1) Total value of work done or supplies made as per account within | Bill | 4992849=00 |
| 2) Deduct amount to be held in reserve being .....percent Rs..... | IT 2% | 99.857=00 |
| 3) " Balance | LWC 1% | 4928=00 |
| 4) Deduct Payment: | CBF 0.1% | 493=00 |
| a) Amount of previous payment as in the Office Cash Book Voucher No.....Dated.....S.D. No..... adjusted towards cash advance recovery of Amount | SBD 7.5% | 3.74.464=00 |
| | deductions | 5.29.242=00 |
| b) Payments Now made } cost store or other material supplied. recovery of amount creditable to this/other work. Amount paid on this bill Cheque / Cash. | cheque = | 44.63.607=00 |
| 5) Balance being unpaid value of work done held in reserve. | | |
| 6) Deduct cash advance made on the Office cash Book Voucher No..... dated.....less adjustments. | | |
| 7) Net amount due to or from Contractor unadjustments items. | | |
| 8) Advance to Contractor for materials brought to site (as detailed) within. | | |
| 9) Value of Government materials supplied. | | |
| Total amount adjusted - | | |

EXECUTIVE ENGINEER-4
KRIDL, BBMP DIVISION
BENGALURU-560 010

Contractor's Signature

Received Rs..... (in words).....

.....

by cash and by adjustment of Payment as per memorandum

(in final settlement of all demands)

Witness
1.
2.

Dated

Signature of Contractor

Paid by me by Cheque No ...Dated.....

Cash Rs.....

Dated.....

Initials of Officer making payment

(For use in the Office)

Stamp

ಲೆಕ್ಕಶೀರ್ಷಿಕೆ P3110 14 Th Finance

ರೂ: 4992849=00 ಮಾಡಿ ಸ್ವೀಕರಿಸಿದೆ

ರೂ: 44,63,607=00 ಚೆಕ್ ನೀಡಬಹುದಾಗಿದೆ

ರೂ: 5.29.242=00 ಹೊಂದಾಣಿಕೆ ಮಾಡಿದೆ

Executive Engineer

ಲೆಕ್ಕ ಅಧೀಕ್ಷಕರು

ಕಾ.ಪಾ.ಅ.(ವಿ) ಯಲಹಂಕ ವಲಯ

| Sl. No | Description of Item | Unit |
|---|---|---|
| | **Name Of Work:- Providing Energy Efficient Street Lights controls and Connecting Lines in Ward no 6.** | |
| 1 | LED Street light. Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs. 50000 hr. @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminaire > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4 KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools.<br><br>LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI 75+. housing with supplier word mark / name shall be engraved / Embossing on the die cast housing / body part. . Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008. Warranty of 5 Years against any manufacturing defect working under | Nos |
| 2 | LED Street light.Supply of LED Streetlight with pressure die cast aluminum housing body with optimal heat sink for better thermal dissipation. Diffuser with Injection moulded & is made of polycarbonate material with high transmission index, delivering superior light output. Rated life Burning Hrs 50000 hr @ Lumen Maintenance of 70%. CCT > 5500K, IP 66 optical and electrical compartment & impact resistance of complete luminare > IK08. Power Factor >0.9 with mains Current should not be greater than 0.1A to 0.7A & Surge Protection- Min 4KV along with Over voltage/Overload, short circuit/ miswiring protection. Compatible for pole mounting with outer dia of 40mm to 50mm. Universal Voltage driver to operate wide voltage range from 100V to 270V 50/60Hz application. Over load & Short circuit protection ensures reliable operation in spite of problem in output side. Compliance to IS 10322/IEC 60598, LM 79 & LM 80 Adherence with RoHS. UL approved MCPCB. Top access street light with single screw to ensure ease of maintenance at the sight site location with minimized minimal tools. | |
| 3 | LED Light fixture with .....W System Power consumption. LED Efficiency>130lm/w at 1W & Fixture Efficiency >80lm/w with nominal CRI >75. Luminaire manufacturer should have in-house facility accredited by NABL/CPRI & any Government certified agency & Design & Development facility certified by ISO 9001:2008 . Housing with supplier word mark /name shall be Engraved / Embossing on the die cast housing/ Body part. Warranty of 5 Years against any manufacturing defect working under standard electrical conditions as mentioned above should be given by LED source manufacture. Suitable for B1/B2 Roads as per IS 1944 Part I & Part II.LED Streetlight 65watts | each |

| Previous Measurement | | Present Measurement | | | Total Upto Date | | Remarks |
|---|---|---|---|---|---|---|---|
| Qty | Cost | Qty | Rate | Amount | Qty | Cost | |
| | | 19 | 31250.00 | 593750.00 | 19 | 593750.00 | |
| | | 183 | 18720.00 | 3425760.00 | 183 | 3425760.00 | |

| | | |
|---|---|---|
| 4 | Supplying & fixing of 32 mm dia class A GI pipe bracket up to 2 mtrs long bent at suitable angle and fixing to this bracket 1x40/2x40 or rail or RCC pole/wall using suitable clamps, bolts, and nuts and wiring using suitable capacity wires complete. Using 32mm dia G.I pipe | |
| 5 | Wiring for lighting / power circuit using one of pvc insulated 1100v grade stranded aluminum unsheathed wire single core cable in open or concealed system of wiring as per IS - 694 : 19904sq mm | |
| 6 | Supplying of 1.1KV grade Aerial Bunched Cable Stranded & Compacted Aluminum Phase Conductor, and Stranded Messenger Conductor with all aluminum Alloy, Phase Conductor is insulated with XLPE Compound, insulated Messenger with specified IS-14255:1995 & confirming to GTP of GROUP-A.2 X 25 + 1 X 25 SQ.MM | |
| 7 | Stringing of 1.1kv LT Arial Bunched Cable, BESCOM SR | |
| 8 | Open Conduit Systeme: Supplying heavy gauge PVC conditpipe,,,,,,,,,, dia confirming to IS 2509 with suitable size bends,junction boxes, adhesibve paste etc., and fixing using inverted wood plugs in case of RCC ceiling and RCC wall stone structure or plug incase of brick walls and cement plastering damaged portionusing heavy gauge saddles at an interval of 700mm using NF screws.c)32mm dia 2.5mm thick | |
| 9 | Supplying and fixing angle iron frame work fabricated out of M.S angle iron... and M.S. flat... with bolts, washers etc., and painted with 2 coats of red oxide and then two coats of approved paint. a)50X50X6 mm | |
| 10 | Supplying and stringing of ACSR Conductor (6/2.59mm Al +1/2.59mm Steel). | |
| 11 | 1.1 KV Pin Insulator | |
| 12 | No. 8 Strain Insulator | |
| 13 | 2 Pin 45x45x5mm -510mm | |
| 14 | Fixing halogen/ metal hallide /SVL/IL/LED flood light fittings over existing pole/ wall ceiling including clamps bolts nuts and wiring using sitable capacity wires | |
| 15 | Thiristor based single/ Three phase smart street light control and monitoring system Remotely control and and monitorable smart street light system by using web or mobile application .smart control system has hardware ruggedness over field issues like line cross, line short, lighting and any other irregularities in voltage. It has some features like 1.Remote lighting management.2.Precise lighting turnoff.3.Load ballancing.4.Load power regulation.5.Status tracking. It works on the basis of some of these features 1) Main Control Unit ( Mother board ) : Handles controlling , data handling and other communication process. 2) Communication unit: GSM/GPRS quad bandwith RS232 interface wireless communication unit 3) Gate Driver Unit: Firing angle controllable board for driving the thyristor 4) Switching Thyristor: SCR 110 AMPS dual thyristor modules for switching 5) Embedded Firmware: Firmware to control , handle , process the data and communicate it wirelessly.6) Metal Enclosure : IP66 weather prof metal enclosure.7) Transformers: Customized step down transformers for various | |
| | Total Rs | |
| | Add KRIDL Charges Rs 9.1% | |
| | Total Rs | |

Certificate: 1. Certefied that the Above Work has been carreid out satisfactorily

T.N. Boraiah

Assistant Executive Engineer (Ele)
BBMP, Bangalore

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ach | | | | 220 | 893.00 | 196460.00 | 220 | 196460.00 |
| r Mtr | | | | 540 | 7.50 | 4050.00 | 540 | 4050.00 |
| r Mtr | | | | 50 | 143.00 | 7150.00 | 50 | 7150.00 |
| r Mtr | | | | 50 | 10.30 | 515.00 | 50 | 515.00 |
| r Mtr | | | | 30 | 100.00 | 3000.00 | 30 | 3000.00 |
| tr | | | | 6 | 263.00 | 1578.00 | 6 | 1578.00 |
| Mtr | | | | 1600 | 30.00 | 48000.00 | 1600 | 48000.00 |
| ch | | | | 30 | 44.00 | 1320.00 | 30 | 1320.00 |
| ch | | | | 20 | 14.00 | 280.00 | 20 | 280.00 |
| ch | | | | 29 | 306.00 | 8874.00 | 29 | 8874.00 |
| ch | | | | 160 | 176.00 | 28160.00 | 160 | 28160.00 |
| os | | | | 5 | 51500.00 | 257500.00 | 5 | 257500.00 |
| | | | | | | 4576397.00 | | 4576397.00 |
| | | | | | | 416452.13 | | 416452.13 |
| | | | | | | 4992849.13 | | 4992849.13 |